



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,422	03/02/2004	Gregory Rittmeyer	1641.68709	3771

7590 08/25/2005
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Drive
Chicago, IL 60606

EXAMINER

PHAM, LEDA T

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,422	RITTMAYER, GREGORY	
	Examiner	Art Unit	
	Leda T. Pham	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/2/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group II, claims 6 - 13 in Paper filed on 7/5/05 is acknowledged.

Since Applicant did not provide any traversal arguments to the restriction requirement, the response is considered as election without traverse; therefore, the election/restriction is made FINAL.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lill et al. (4,287,446) in view of McLane (U.S. Patent No. 6,331,760 B1).

Referring to claim 6, Lill teaches a stator for a multi-phase motor (figure 1), comprising:
a plurality of coils (88) of each of the phases being successively wound with a continuous first wire (84);

a disconnection (54) in said first wire between any two phases where respective ends of said any two phases are both not neutral ends; and

a second wire (96);

Art Unit: 2834

However, Lill does not teach the second wire connecting a neutral end of any one of the phases to a neutral end of at least one other phase where said neutral end of said any one of said phases is not connected to said neutral end of said at least one other phase by said first wire.

McLane teaches in his invention the second wire (104) connecting a neutral end of one phase to a neutral end of another phase where the neutral end of the one phase is not connected to the neutral end of the another phase by the first wire (121, figure 4, and 304, 308 figure 6) to produce a delta or wye connection with varying amounts of capacitive coupling between the individual winding phases.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the connection of the second wire of the neutral ends as taught by McLane. Doing so would provide an improved polyphase induction motor and winding.

Referring to claim 7, Lill teaches the stator further including an insulator (28) attached to an end of said stator and having a plurality of slits for passing said first wire therethrough (figure 2).

Referring to claim 8, Lill teaches the stator wherein said slits have differing depth (44, 46, 52) to prevent portions of said first wire from any of the phases from coming in electrical contact with each other (figure 4).

Referring to claim 9, Lill teaches the stator wherein a lead end of the phases terminate at a pocket (10) formed in said insulator and connected to an insulation displacement terminal (IDC) (54, figure 1).

Referring to claim 10, Lill teaches the stator wherein said second wire connects said neutral end of any one of said phase to said neutral end of another phase using an insulation displacement terminal (IDC) (figure 1, 12).

Referring to claim 11, Lill teaches the stator wherein said disconnection occurs at an insulation displacement terminal (54, figure 1).

3. Claims 12 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lill and McLane as applied to 1 above, and further in view of Horst (U.S. Patent No. 5,770,910).

Referring to claim 12, the combination of Lill and McLane teaches the claimed invention, except for the added limitation of the coil are wound using a needle winder.

Horst teaches a switched reluctance motor stator assembly using a needle winder for winding the coil in the stator to increase the fill factor of the stator and reduce motor noise caused by movement of the stator winding.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a needle winder to winding the coil in the stator as taught by Horst. Doing so would reduce noise in the motor caused by the movement of the stator winding.

Referring to claim 13, Lill teaches the stator is wound in a single tooth winding pattern (figure 1, 10).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (571) 272-2032. The examiner can normally be reached on M-F (8:30-6:00) first Friday Off.

Art Unit: 2834

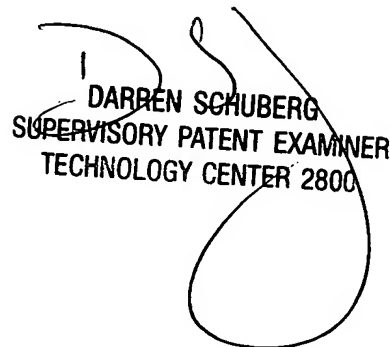
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LTP
August 18, 2005

Leda T. Pham
Examiner
Art Unit 2834



DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800